

Condition Assessment of William Beaumont General Hospital Historic Buildings at Fort Bliss, Texas

Appendix A: Building Condition Matrix

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Foreword

This study was conducted for the Department of Environment, Fort Bliss, TX, under Military Interdepartmental Purchase Request (MIPR) 2042-96, "William Beaumont Army Medical Center Mitigation," dated 30 September 1996. The technical monitor was Daniel Delahaye, ATZC-DOE-C.

The work was performed by the Facilities Maintenance Branch (CF-F) of the Facilities Division (CF), Construction Engineering Research Laboratory (CERL). The CERL Principal Investigator was Thomas R. Napier. The technical editor was Gordon L. Cohen, Information Technology Laboratory – Champaign. Mark W. Slaughter is Chief, CEERD-CF-F, and L. Michael Golish is Chief, CEERD-CF. The Technical Director of the Facility Acquisition and Revitalization business area is Dr. Paul A. Howdyshell, CEERD-CV-ZT, and the Director of CERL is Dr. Alan W. Moore.

CERL is an element of the Engineer Research and Development Center (ERDC), U.S. Army Corps of Engineers. The Commander and Executive Director of ERDC is COL John W. Morris III, EN, and the Director is Dr. James R. Houston.

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Appendix A: Building Condition Matrix

This document is Appendix A of the report: Condition Assessment of William Beaumont General Hospital Historic Buildings at Fort Bliss, Texas, ERDC/CERL Technical Report 02-26.

This Appendix provides an "at-a-glance" display of the each building's condition, described by major systems and components. The condition as a whole is represented, but not specific instances or requirements. Conditions are described as follows:

- Indicates the system or its components are generally serviceable as is, but may require cleaning, reconditioning, or other routine re-commissioning tasks.
- Indicates repair or minor repairs will be required. These may include the system as a whole, or some of its components within the building.
- Indicates that extensive repair or rehabilitation will be required. This may include the system as a whole, or many of its components throughout the building.
- Indicates that replacement of the system or components is appropriate, either because of deterioration or damage, or because it may be inappropriate in a rehabilitation context.

Note that the serviceability of a building system or component can vary according to the perspective from which it is evaluated. Performance of an item may be completely satisfactory in absolute terms. That is, it is functioning as intended or expected, and may even have been recently installed. However, in a rehabilitation context, a component may be inappropriate due to its appearance, or effect on the overall appearance of the building.

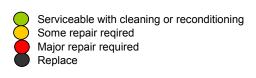
Therefore, two perspectives are provided. The "Serviceability" perspective represents the system's or component's condition in their current state. That is: (1) if the item performing as intended, (2) if repair or upgrade would be necessary, and (3) what is the extent of deficiency or damage and what level of repair or upgrade would be necessary to restore its performance. The "Rehabilitation" perspective considers the appropriateness of the existing system or component within a rehabilitation context, as well as its current serviceability or performance.

SI conversion factors				
1 in.	=	2.54 cm		
1 ft	=	0.305 m		
1 yd	=	0.9144 m		
1 sq in.	=	6.452 cm ²		
1 sq ft	=	0.093 m^2		
1 sq yd	=	0.836 m^2		
1 cu in.	=	16.39 cm ³		
1 cu ft	=	0.028 m^3		
1 cu yd	=	0.764 m ³		
1 gal	=	3.78 L		
1 lb	=	0.453 kg		
1 kip	=	453 kg		
1 psi	=	6.89 kPa		
°F	=	(°C x 1.8) + 32		
1 BTU	=	1.055056+e021 attjoules		
1 psf	=	47.88026 pascals		

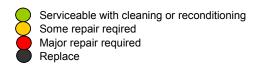
7122, Bandstand	Current Serviceability	Adaptive use / Rehab Design	Description
SUBSTRUCTURE Foundation Slab on grade	8		Repair spalled foundation wall surfaces Repair or replace floor slab
SUPERSTRUCTURE Load bearing walls & columns Floor framing Roof framing	N/A	N/A	Repair spalled column surfaces Replace deteriorated rafters
EXTERIOR CLOSURE Roofing Walls Doors Windows	N/A N/A N/A	N/A N/A N/A	Replace roofing (possible ACM)
INTERIOR CONSTRUCTION Partitions Doors Finishes	N/A N/A	N/A N/A	Refinish / replace deteriorated bead board ceiling
MECHANICAL Plumbing HVAC Fire protection	N/A N/A N/A	N/A N/A N/A	
ELECTRICAL Power & distribution Lighting	N/A N/A	8	Install electrical power Install exterior & interior lighting
CONVEYING SYSTEMS Elevators / lifts	N/A	N/A	

7151, Chapel	Current Serviceability	Adaptive use / Rehab Design	Description
SUBSTRUCTURE Foundation			
SUPERSTRUCTURE Load bearing walls & columns Floor framing Roof framing	8	8	
EXTERIOR CLOSURE Roofing Walls Doors Windows			Replace w/ historically appropriate shingle style Repair minor cracking; refinish Replace entry. Rehabilitate / replace sacristy & boiler room doors Repair / refinish lobby & sacristy windows
INTERIOR CONSTRUCTION			Reinstall nave windows
Partitions Doors Finishes			Remove partitioning in choir loft Repair / refinish interior doors Decontaminate all surfaces Refinish wall surfaces Refinish nave floor Replace other floor finishes Repair minor cracking / defects
MECHANICAL Plumbing HVAC Fire protection	N/A	N/A	Add restroom facilities Replace heating / cooling systems
ELECTRICAL Power & distribution Lighting	8	8	Upgrade to code Upgrade to code
CONVEYING SYSTEMS Elevators / lifts	N/A	N/A	

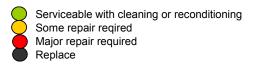
7152, Theater	Current Serviceability	Adaptive use / Rehab Design	Description
SUBSTRUCTURE Foundation Slab on grade	8	8	
SUPERSTRUCTURE Load bearing walls & columns Floor framing Roof framing	N/A	N/A	Replace columns at entry canopy
EXTERIOR CLOSURE Roofing Walls Doors Windows			Replace w/ historically appropriate shingle style Repair minor cracking; refinish Refinish windows at lobby & washroom areas
INTERIOR CONSTRUCTION Partitions Doors Finishes	8	8	
MECHANICAL Plumbing HVAC Fire protection	8	8	
ELECTRICAL Power & distribution Lighting	8	8	
CONVEYING SYSTEMS Elevators / lifts	N/A	N/A	
SITE Site improvements			Repair / replace stoop at southeast door



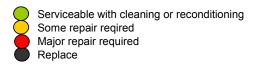
	Current	Adaptive use / Rehab	
7155, Gymnasium	Serviceability	Design	Description
SUBSTRUCTURE Foundation Slab on grade	8	8	
SUPERSTRUCTURE Load bearing walls & columns Floor framing Roof framing	8	8	
EXTERIOR CLOSURE Roofing			Repair damaged roofing at south gable Replace w/ historically appropriate shingle style
Walls Doors Windows	8		Repair minor cracking; refinish Replace w/ historically appropriate doors Repair & refinish windows
INTERIOR CONSTRUCTION Partitions Doors Finishes			Repair / refinish doors; replace where missing Decontaminate all interior surfaces Repair NW corner of gym floor Refinish wall surfaces Replace other floor finishes Refinish ceiling surfaces
MECHANICAL Plumbing HVAC	8	8	Reconfigure plumbing for future occupancy Remove evaporative coolers from roof Remove boiler enclosure from east side Replace heating & cooling systems
Fire protection	N/A	N/A	Tropiaco ficaling a cooming cyclome
ELECTRICAL Power & distribution Lighting	8	8	Upgrade to code & future occupancy Upgrade to code & future occupancy
CONVEYING SYSTEMS Elevators / lifts	N/A		Add lifts for accessibility where required
SITE Grading / drainage Site improvements	8	8	Regrade to drain away from west wall Regrade; install wheelchair access at west door



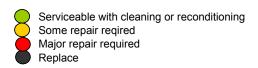
7157, Barracks	Current Serviceability	Adaptive use / Rehab Design	Description
SUBSTRUCTURE Foundation			Repair crack at south wall
SUPERSTRUCTURE Load bearing walls & columns Floor framing Roof framing Porch framing	8	8	Confirm loading capacity for future occupancy Repair / level framing under 1st & 2nd fl washrooms Confirm integrity of framing at porch corners Confirm integrity of framing at columns & stairs Repair cracking at porch slab southeast corner Add accessible entry to first floor
EXTERIOR CLOSURE Roofing Walls Doors Windows Porch	<!--</td--><td></td><td>Replace roofing at porch w/ metal roofing Replace w/ historically appropriate shingle style Repair minor cracking; refinish Close opening at evaporative cooler duct Replace w/ historically appropriate doors Repair / refinish windows; replace missing sashes Reinstall windows at 2nd floor east elevation Remove 2nd floor porch closure Rehabilitate / replace porch railings & trim</td>		Replace roofing at porch w/ metal roofing Replace w/ historically appropriate shingle style Repair minor cracking; refinish Close opening at evaporative cooler duct Replace w/ historically appropriate doors Repair / refinish windows; replace missing sashes Reinstall windows at 2nd floor east elevation Remove 2nd floor porch closure Rehabilitate / replace porch railings & trim
INTERIOR CONSTRUCTION Partitions Doors Finishes	8	8	Reconfigure per future occupant's requirements Replace w/ historically appropriate doors Fire rated doors required at protected stairwells Repair / refinish wall & ceiling finishes Replace floor finishes as req'd for future occupant
MECHANICAL Plumbing HVAC Fire protection	8	8	Reconfigure for future occupant Replace heating / cooling systems Extend sprinkler to 2nd floor, attic, & crawlspace
ELECTRICAL Power & distribution Lighting	8	8	Upgrade to code & future occupancy Upgrade to code & future occupancy
CONVEYING SYSTEMS Elevators / lifts	N/A		Add elevator where required for future occupancy
SITE Site improvements			Install wheelchair access at northeast door



7158, Barracks	Current Serviceability	Adaptive use / Rehab Design	Description
SUBSTRUCTURE Foundation			Repair crack at south wall
SUPERSTRUCTURE Load bearing walls & columns Floor framing	8	8	Confirm loading capacity for future occupancy Repair / level framing at 1st & 2nd fl washrooms
Roof framing Porch framing	8	8	Confirm integrity of framing at porch corners Confirm integrity of framing at columns & stairs Repair cracking at porch slab southeast corner Add accessible entry to first floor
EXTERIOR CLOSURE			
Roofing			Replace roofing at porch w/ metal roofing Replace w/ historically appropriate shingle style
Walls			Repair minor cracking; refinish Close opening at evaporative cooler duct
Doors Windows			Replace w/ historically appropriate doors
Porch			Repair / refinish windows; replace sashes as req'd Remove 2nd floor porch closure Rehabilitate / replace porch railings & trim
INTERIOR CONSTRUCTION			
Partitions Doors	8	2	Reconfigure per future occupant's requirements Replace w/ historically appropriate doors
Finishes	0	•	Fire rated doors required at protected stairwells Repair / refinish wall & ceiling finishes Replace floor finishes as req'd for future occupant
MECHANICAL	_	_	
Plumbing HVAC	8	2	Reconfigure for future occupant Replace heating / cooling systems
Fire protection		•	Install sprinkler system; include attic & crawl space
ELECTRICAL Power & distribution Lighting	8	8	Upgrade to code & future occupancy Upgrade to code & future occupancy
CONVEYING SYSTEMS Elevators / lifts			Add elevator / lift where required
SITE Site improvements			Install wheelchair access at northeast door



7159, Barracks	Current Serviceability	Adaptive use / Rehab Design	Description
SUBSTRUCTURE Foundation		\bigcirc	Repair crack at south wall
SUPERSTRUCTURE Load bearing walls & columns Floor framing	8	8	Confirm loading capacity for future occupancy Repair / level framing under 1st & 2nd fl washrooms Repair / level framing at 1st & 2nd fl south end
Roof framing Porch framing	8	8	Confirm integrity of framing at porch corners Confirm integrity of framing at columns & stairs Repair cracking at porch slab corners Add accessible entry to first floor
EXTERIOR CLOSURE Roofing			Replace roofing at porch w/ metal roofing
Walls			Replace w/ historically appropriate shingle style Repair minor cracking; refinish Close opening at evaporative cooler duct
Doors Windows	8	8	Replace w/ historically appropriate doors Reinstall windows at 2nd floor east elevation Repair / refinish windows; replace sashes as reg'd
Porch			Remove 2nd floor porch closure Rehabilitate / replace porch railings & trim
INTERIOR CONSTRUCTION			
Partitions Doors	8	8	Reconfigure per future occupant's requirements Replace w/ historically appropriate doors
Finishes			Fire rated doors required at protected stairwells Repair / refinish wall & ceiling finishes Replace floor finishes as req'd for future occupant
MECHANICAL			Describer to factorize a second
Plumbing HVAC	8	8	Reconfigure for future occupant Remove boiler enclosure at north end
Fire protection			Replace heating / cooling systems Extend sprinkler system to attic & crawlspace
ELECTRICAL Power & distribution Lighting	8	8	Upgrade to code & future occupancy Upgrade to code & future occupancy
CONVEYING SYSTEMS Elevators / lifts			Add elevator / lift where required



7166, BOQ	Current Serviceability	Adaptive use / Rehab Design	Description
SUBSTRUCTURE Foundation Slab on grade	8	8	
SUPERSTRUCTURE Load bearing walls & columns Floor framing Roof framing	8	8	
EXTERIOR CLOSURE Roofing Walls Doors	8		Repair; or replace w/ appropriate style shingle Repair minor cracking; refinish Replace south basement door Repair main entry door
Windows			Repair main entry door
INTERIOR CONSTRUCTION Partitions Doors Finishes	8	8	Repair / refinish wall & ceiling surfaces Clean or replace carpet
MECHANICAL Plumbing HVAC Fire protection	8	8	Replace heating / cooling systems
ELECTRICAL Power & distribution Lighting	8	8	
CONVEYING SYSTEMS Elevators / lifts	N/A	N/A	
SITE Grading / drainage	•	•	Regrade to divert runoff at west wall Regrade to prevet intrusion at south b'smt. door

7167, Conference Center	Current Serviceability	Adaptive use / Rehab Design	Rehabilitat'n Design
SUBSTRUCTURE Foundation Slab on grade	8	8	
SUPERSTRUCTURE Load bearing walls & columns Floor framing Roof framing	8	8	Repair cut joists at utility room
EXTERIOR CLOSURE Roofing Walls Doors Windows			Repair; or replace w/ appropriate style shingle Repair minor cracking; refinish
Porch	8	8	Refinish porch railings & trim
INTERIOR CONSTRUCTION Partitions Doors Finishes	8	8	
MECHANICAL			
Plumbing HVAC	8		Remove evaporative cooler from roof Replace cooling system
Fire protection			Tropiade cooling dystem
ELECTRICAL Power & distribution Lighting	8	8	
CONVEYING SYSTEMS Elevators / lifts			
SITEWORK Grading / drainage Site improvements	8		Repair or replace ext. stairs & wheelchair ramp